

**WHAT IS CLAIMED IS:**

1. An method for measuring an astigmatism of an optical pickup which applies a light beam converged by an objective lens to a  
5 recording medium, the method comprising:

a first step of finding a first position in an advancing direction of the light beam, which first position causes the beam diameter of the light beam to become minimum in a first direction orthogonal to the advancing direction of the light beam;

10 a second step of finding a second position in an advancing direction of the light beam, which second position causes the beam diameter of the light beam to become minimum in a second direction orthogonal to both the advancing direction of the light beam and the first direction;

15 a third step of finding a first distance representing a difference between the first position and the second position in the advancing direction of the light beam;

a fourth step of finding a third position in the advancing direction of the light beam, which third position causes the beam  
20 diameter of the light beam to become minimum in a third direction orthogonal to the advancing direction of the light beam and inclining 45 degrees from said first direction;

a fifth step of finding a fourth position in said advancing direction of the light beam, which fourth position causes the beam  
25 diameter of the light beam to become minimum in a fourth direction orthogonal to both the advancing direction of the light beam and the third direction; and

a sixth step of finding a second distance representing a difference between said third position and said fourth position in said advancing direction of the light beam,

wherein an astigmatism of the optical pickup is measured  
5 in accordance with said first distance and said second distance.

2. A method for adjusting an astigmatism of an optical pickup which applies a light beam converged by an objective lens to a recording medium, said method comprising:

10 a first step of finding a first position in an advancing direction of the light beam, which first position causes the beam diameter of the light beam to become minimum in a first direction orthogonal to the advancing direction of the light beam;

a second step of finding a second position in an advancing  
15 direction of the light beam, which second position causes the beam diameter of the light beam to become minimum in a second direction orthogonal to both the advancing direction of the light beam and the first direction;

a third step of finding a first distance representing a  
20 difference between said first position and said second position in said advancing direction of the light beam;

a fourth step of finding a third position in said advancing direction of the light beam, which third position causes the beam diameter of the light beam to become minimum in a third direction  
25 orthogonal to said advancing direction of the light beam and inclining 45 degrees from said first direction;

a fifth step of finding a fourth position in said advancing

direction of the light beam, which fourth position causes the beam diameter of the light beam to become minimum in a fourth direction orthogonal to both the advancing direction of the light beam and the third direction;

5           a sixth step of finding a second distance representing a difference between said third position and said fourth position in said advancing direction of the light beam; and

          a seventh step of measuring an astigmatism of the optical pickup in accordance with said first distance and said second  
10 distance,

          wherein the astigmatism of the optical pickup is adjusted in accordance with the measurement result obtained in said seventh step.

15    3.     The method according to claim 2, wherein an incident angle of the light beam entering the objective lens is adjusted in accordance with said first distance and said second distance.

          4.     The method according to claim 2, wherein the beam diameter  
20 of the light beam is the diameter of spot image of the light beam.

          5.     A system for measuring an astigmatism of an optical pickup which applies a light beam converged by an objective lens to a recording medium, said apparatus comprising: measurement unit and  
25 operation unit,

          wherein the measurement unit is provided for measuring:  
          a first position in an advancing direction of the light beam,

which first position causes the beam diameter of the light beam to become minimum in a first direction orthogonal to the advancing direction of the light beam;

5 a second position in an advancing direction of the light beam, which second position causes the beam diameter of the light beam to become minimum in a second direction orthogonal to both the advancing direction of the light beam and the first direction;

10 a third position in said advancing direction of the light beam, which third position causes the beam diameter of the light beam to become minimum in a third direction orthogonal to said advancing direction of the light beam and inclining 45 degrees from said first direction; and

15 a fourth position in said advancing direction of the light beam, which fourth position causes the beam diameter of the light beam to become minimum in a fourth direction orthogonal to both the advancing direction of the light beam and the third direction,

20 wherein the operation unit is provided for finding a first distance representing a difference between said first position and said second position in said advancing direction of the light beam, as well as a second distance representing a difference between said third position and said fourth position in said advancing direction of the light beam,

wherein the astigmatism of the optical pickup is measured in accordance with said first distance and said second distance.